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ABSTRACT

The present study attempted to identify factors associated with memory deficits in 36 learning disabled and 36 normal children in grades 3 and 5. Ss were given free and serial recall tasks and interviewed about their understanding of memory processes. Deficits in the recall of the learning disabled children were found, as expected. Examination of interview responses and study behaviors during recall led to the proposal that learning disabled children, although they have knowledge of strategy use and task demands in free and serial recall equivalent to that of average readers, lack general awareness of memory and variables affecting memory, and are less likely to monitor their own state of knowledge by using appropriate self testing strategies during study. (Author/DB)

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Memory in Learning Disabled Children: Strategy Use, Self-Monitoring, and Metamemory

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An extended version of the paper is available upon request.

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Memory in Learning Disabled Children: Strategy Use, Self-Monitoring, and Metamemory

Abstract

The present study attempted to identify factors associated with memory deficits in learning disabled children. Performance of learning disabled and average readers of grades 3 and 5 (total N = 72) was investigated in free and serial recall tasks and in a metamemory interview. Deficits in the recall of the learning disabled children were found, as expected. Examination of interview responses and study behaviors during recall led us to propose that learning disabled children, although they have knowledge of strategy use and task demands in free and serial recall equivalent to that of average readers, lack general awareness of memory and variables affecting memory, and are less likely to monitor their own state of knowledge by using appropriate self-testing strategies during study.

Memory in Learning Disabled Children: Strategy Use, Self-Monitoring, and Metamemory

It has been demonstrated in a number of studies that learning disabled children recall less items in memory tasks than do same-aged children who are reading at or above grade level (Bauer, 1979. Dallago & Moely 1980; Torgesen 1977a, 1977b; Torgesen & Goldman, 1977). The present study compares learning disabled children with average readers of two age levels in an attempt to learn about the factors underlying memory tasks performance that may be responsible for such differences.

Research participants were 72 children, enrolled in public schools in a middle-class suburb of a Southern city. Half of the children were third graders and half were fifth graders; at each grade level, half of the children were learning disabled and half were average achievers. The learning disabled children had been classified on the basis of formal psychological/educational assessment procedures of the school system. They did not differ from the average readers in intelligence, as assessed with four WISC-R subtests, but were severely deficient in reading achievement on the CTBS and the WRAT.

Interview questions used to assess the child's knowledge about aspects of memory were adapted from Kreutzer, Leonard, and Flavell's (1975) interview study and from Wellman's (1978) study of children's knowledge of variables affecting memory. Additional items concerning free and serial recall were developed for the present study. Several memory tasks were given in another session. Both free and serial recall were assessed under fixed presentation-study-recall conditions to determine age and group differences. Subsequently, free and serial recall tasks were given in which the child was instructed to indicate when he or she had completed study and was ready to recall, in order to measure the child's ability to monitor his or her own state of recall

preparedness. The child's study behaviors were observed in all tasks. Half of the children received the metamemory interview first; half received the recall tasks first.

Findings indicated that the learning disabled children recalled less material than average readers on both free recall tasks and on the serial recall task in which they controlled study time. What factors might be responsible for this deficit? Findings are relatively clear for the serial recall task, in that the learning disabled children took less time to prepare for recall than average readers did. By stopping their study too soon, they were less able to recall items correctly, Investigation of study behaviors indicated that the most important difference between the two groups was in the use of anticipation and rehearsal, both of which involve a kind of self-testing or monitoring of one's own state of recall readiness. In using these strategies less than average readers did, the learning disabled were less able to know when they should stop studying and attempt recall. Other study behaviors (looking at the items, naming items) showed no differences. Effects were similar for both age groups.

In the free recall task the learning disabled used semantic organization in study and recall of items and engaged in various study behaviors as much as average readers did. In the task in which children determined the length of study, the learning disabled showed less self-testing behavior on the first trial, and reproduced the order of items created during study to a lesser extent in their recall. These findings may reflect a tendency for the learning disabled to systematize their study less in this relatively unstructured task. Age differences in recall, organization, etc., were generally in line with previous work in this area (Moely, 1977).

Learning disabled children were less competent than average readers on

several of the metamemory tasks. First, they were less aware of variables affecting memory and the possible interactions of such variables. Second, they were less knowledgeable about general memory phenomena than average readers were, i.e., they tended to be less aware of phenomena such as savings, interference, and recall requirements that can affect performance. But no deficits were shown in the learning disabled children's knowledge of strategies and factors involved in performing a free recall or a serial recall task. Age differences appeared on several tasks, but again, age did not interact with group.

The present study is a beginning effort to identify the factors associated with lesser memory ability in learning disabled children. Of particular importance is the ability to effectively monitor one's own study so as to be able to judge correctly when one is ready to attempt recall. Knowledge of variables affecting memory and of general memory phenomena may be related to the tendency to actively examine one's potentially varying state of knowledge. Learning disabled children did not have less information available about free or serial recall tasks, but they seemed to have difficulty in translating this information into an effective plan for systematic study, self-monitoring, and recall.

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